

AMENDMENTS TO THE SPECIFICATION

On page 7, the last full paragraph (continuing onto page 8) is amended to read:

The array of carbon nanotube probes used in the present invention employs the conventional microelectromechanical technology to form the microstructure thereof. Referring to FIG. 1, an array of probes 3 having carbon nanotubes 2 is formed on a p-type wafer, an n-type wafer, a glass substrate or the like substrate 1 by chemical vapor deposition, plasma-enhanced chemical vapor deposition or field-enhanced chemical vapor deposition. In addition to the carbon nanotubes 2 grown on the end of the cantilever 6, they can be grown on a pyramidal-shaped tip 7 in appropriate embodiments, as shown in FIG. 2. The probes 3 are designed to form on the bottom 4 under a reference level 5. Also, the end of the carbon nanotubes 2 is designed to be grown within a distance from zero to several microns from the reference level 5 below, depending on the application of the probes. A groove-shaped structure is used to reduce the possibility of impact on and damage to the probe end caused by a discharging electrode.

On page 8, the first full paragraph is amended to read:

Referring now to FIG. 3, the apparatus of the present invention comprises an XY-dimensional positioning platform 30, a Z-dimensional positioning platform 20, a piezoelectric actuator 40, a position sensor 50, a discharging electrode 60, an electrode power line 70, and a silicon wafer substrate 10 having an array of carbon nanotube probes. FIG. 4 is an enlarged view of the structure of the silicon wafer substrate 10, the position sensor 50 and the discharging electrode 60, to facilitate the understanding of the relative position between the discharging electrode 60 and the carbon nanotube 2 as well as the way of cutting. The discharging electrode 60 can be a planar or a wire electrode, having an angle with respect to a reference level 11. In general, the angle is in the range of from about zero to 15 degrees, depending on the microscopic angle of the discharging electrode.